REMARKS

Claims 1-13 are pending in this application. Support for new claim 13 may be found in claim 9 as filed originally. Reconsideration is requested based on the following remarks.

Claim Rejections - 35 U.S.C. § 102:

Claims 9, 11, and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Park et al., US 6,173,208 (hereinafter "Park"). The rejection is traversed.

Claim 9, in particular, recites,

"a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units."

Park neither teaches, discloses, nor suggests a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by *dividing* the machining program so that divided portions of the machining program are stored in respective ones of the input/output units, as recited in claim 9. To the contrary, as Park describes at column 3, lines 27-33,

> Referring to FIG. 2, at step 17, upon request from the system computer 1, input/output data stored in the hard disk 4 is transferred to the system computer 1 in the form of a database, to be used by the function block diagram editor. At step 18, the input/output data transferred to the system computer 1 is converted to a list of input/output function blocks.

Since, in Park, the input/output data transferred to the system computer 1 is converted to a *list* of input/output function blocks, *divided* portions of the machining program are not stored in respective ones of the input/output units.

Furthermore, as described in Park at column 4, lines 48-65,

> Referring back to FIG. 2, remaining steps for producing structured control codes will be explained. Upon selecting the "code generation" menu included in the main menu shown in FIG. 5, the control algorithm in the form of a function block diagram is converted to structured control codes at step 20. The actual conversion process includes arranging an original block diagram list (a first list) corresponding to a function block diagram edited according to the order of execution to thereby provide a block diagram list (a second list) corresponding to structured control codes. In FIGS. 9a and 9b, an example of the block diagram list is illustrated as a data structure consisting of a plurality of function block records 101-108, and 111-118 each of which includes a pointer to the previous function block record 101a, a pointer to the next function block record 101d, the name of the function block 101b, and information about the function block 101c,

e.g., the numbers of inputs and outputs, and types of each input and output.

Since, in Park, the actual conversion process includes arranging an original block diagram list (a first list) corresponding to a function block diagram edited according to the order of execution to thereby provide a block diagram list (a second list) corresponding to structured control codes, *divided* portions of the machining program are not stored in respective ones of the input/output units, as recited in claim 9. Claim 9 is thus submitted to be allowable. Withdrawal of the rejection of claim 9 is earnestly solicited.

Claims 11 and 12 depend from claim 9 and add further distinguishing elements. Claims 11 and 12 are thus also submitted to be allowable. Withdrawal of the rejection of claims 11 and 12 is also earnestly solicited.

Claim Rejections - 35 U.S.C. § 103:

Claim 9 was rejected under 35 U.S.C. § 103 as being unpatentable over Miyajima, US 5,298,006 (hereinafter "Miyajima") in view of Catino, US 5,319,778 (hereinafter "Catino"). The rejection is traversed. Reconsideration is earnestly solicited.

Neither Miyajima nor Catino teach, disclose, or suggest a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by *dividing* the machining program so that divided portions of the machining program are stored in respective ones of the input/output units, as recited in claim 9. Rather, as acknowledged graciously in the Office Action at page 4, "Miyajima fails to teach that said additional information includes first link data designating an input/output unit immediately preceding each input/output unit and second link data designating an input/output unit following each input/output unit."

Miyajima fails to teach this because Miyajima has no *need* for first link data designating an input/output unit immediately preceding each input/output unit and second link data designating an input/output unit following each input/output unit, since in Miyajima divided portions of the machining program are not stored in respective ones of the input/output units. The order is already known, since machining program 100 of Miyajima is not divided. There is thus no need in Miyajima for additional information including a first link data designating an input/output unit immediately preceding each input/output unit and second link data designating an input/output unit following each input/output unit.

Rather, machining program 100 of Miyajima, which is shown in Fig. 3, is described as being stored in CMOS 24, at column 2, line 57. This is to be contrasted with claim 9, which recites "a storage device storing a plurality of input/output units, each of the input/output units

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storing program data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units."

Catino, for its part, merely describes a single means of manipulating both singly and doubly linked lists, as described at column 2, lines 18 and 19, not a storage device or medium storing input/output units each including program block data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units. A singly or a doubly linked list is not "a storage device or medium storing input/output units each including program block data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units."

Rather, in Catino, forward and backward pointers are used to move to locations within a linked list, as described at column 2, lines 20 and 21. This is to be contrasted with claim 9, which recites "a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units."

Since neither Miyajima nor Catino teach, disclose, or suggest a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units separately, their combination cannot, either. Thus, the claimed invention would not result even if they were combined as proposed in the Office Action. Claim 9 is thus submitted to be allowable. Withdrawal of the rejection of claim 9 is earnestly solicited.

Claims 1, 2, and 5-8:

Claims 1, 2, and 5-8 were rejected under 35 U.S.C. § 103 as being unpatentable over Park in view of Khan et al., US 6,088,624 (hereinafter "Khan"). The rejection is traversed. Reconsideration is earnestly solicited.

Claim 1 recites,

"a storage device or medium storing input/output units each including program block data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units."

Park neither teaches, discloses, nor suggests a storage device or medium storing input/output units each including program block data obtained by *dividing* the machining program

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so that divided portions of the machining program are stored in respective ones of the input/output units, as discussed above with respect to the rejection of claim 9. Khan does not either, and thus cannot make up for the deficiencies of Park with respect to claim 1. Thus, even if Park and Khan were combined as proposed in the Office Action, the claimed invention would not result. Claim 1 is thus submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

Claims 2 and 5-8 depend from claim 1 and add further distinguishing elements. Claims 2 and 5-8 are thus also submitted to be allowable. Withdrawal of the rejection of claims 2 and 5-8 is also earnestly solicited.

Claims 3 and 4:

Claims 3 and 4 were rejected under 35 U.S.C. § 103 as being unpatentable over Park in view of Khan, and further in view of Yamauchi et al., US 5,258,905 (hereinafter "Yamauchi"). The rejection is traversed. Reconsideration is earnestly solicited.

Claims 3 and 4 depend from claim 1 and add further distinguishing elements. Neither Park nor Khan teach, disclose, or suggest "a storage device or medium storing input/output units each including program block data obtained by dividing the machining program so that divided portions of the machining program are stored in respective ones of the input/output units," as discussed above with respect to the rejection of claim 1. Yamauchi does not either, and thus cannot make up for the deficiencies of Park with respect to claims 3 and 4. Thus, even if Park, Khan and Yamauchi were combined as proposed in the Office Action, the claimed invention would not result. Claims 3 and 4 are thus submitted to be allowable. Withdrawal of the rejection of claims 3 and 4 is earnestly solicited.

Claim 10:

Claim 10 was rejected under 35 U.S.C. § 103 as being unpatentable over Park in view of Yamauchi. The rejection is traversed. Reconsideration is earnestly solicited.

Claim 10 depends from claim 9 and adds further distinguishing elements. Neither Park nor Yamauchi teach, disclose, or suggest a storage device storing a plurality of input/output units, each of the input/output units storing program data obtained by *dividing* the machining program so that divided portions of the machining program are stored in respective ones of the input/output units, as discussed above with respect to the rejection of claims 3 and 4. Thus, even if Park and Yamauchi were combined as proposed in the Office Action, the claimed invention would not result. Claim 10 is thus submitted to be allowable. Withdrawal of the

rejection of claims 10 is earnestly solicited.

New Claim 13:

None of the cited references teach, disclose, or suggest dividing a storage device into a plurality of input/output units, dividing a machining program into a plurality of divided portions, and storing the divided portions of the machining program in respective ones of the input/output units, as discussed above. New claim 13 is thus believed to be allowable.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all claims 1-13 are allowable over the cited references. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.
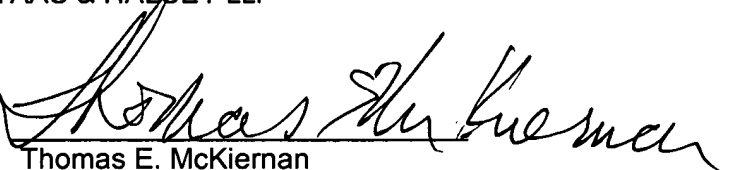
Respectfully submitted,

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